

# QuPanel LTE HP MIMO 2x2 Nf

## Directional High Power multiband LTE MIMO 2x2 antenna

QuPanel LTE HP directional MIMO 2x2 high gain antenna is predicted for 4G LTE mainly, but is compatible with 3G and 2G as well. The antenna improves the signal in rural/suburban and locations where the mobile signal is weak. That antenna is predicted to be installed on the buildings (on the pole or on the wall). Due to very wide working frequency range, the antenna is universal client for LTE bands like LTE700/800/1800/1900/2100/2300/2600. It's compatible with Teltonika: RUT240, RUT900, RUT950, RUT955, RUTX09, RUTX11 and other MIMO 2x2 LTE/3G/2G modems and routers.



## LTE ANTENNA SPECIFICATION

FREQUENCY	694 - 960 MHz 1.7 - 2.2 GHz 2.2 - 2.7 GHz
SUPPORTED LTE/5G BANDS	1, 2, 3, 4, 5, 7, 8, 9, 10, 12, 13, 14, 17, 18, 19, 20, 25, 26, 27, 28, 29, 30, 33, 34, 35, 36, 37, 38, 39, 40, 41, 44, 53, 65, 66, 67, 68, 69, 85, 103, n80, n81, n82, n83, n84, n86, n89, n90, n95, n97, n98, n100, n101, n256
GAIN	694 - 960 MHz : 7 dBi 1.7 - 2.2 GHz : 7 dBi 2.2 - 2.7 GHz : 7 dBi
FRONT-TO-BACK	>10 dB
VSWR	<1.70, max <2.00
BEAMWIDTH	70°/70° ±15°
POLARIZATION	Dual polarized X-Pol
IMPEDANCE	50 $\Omega$

## MECHANICAL SPECIFICATION

MATERIALS	ABS, aluminum, PTFE, Fiberglass
INGRESS PROTECTION	IP67
DIMENSIONS	272 x 276 x 96 mm 10.71 x 10.87 x 3.78 inch
WEIGHT	1.8 kg 3.97 lbs
OPERATING TEMPERATURE	From -40°C to 80°C From -40°F to 176°F
CABLE LENGTH	5m (P/N: APLM2-H) or 10m (P/N: APLM2-H1) or Nf connector (P/N: APLM2-HN)
CABLE TYPE	LMR195 white
CONNECTOR TYPE	2x SMA
MAST DIAMETER	25-60mm 0.98-2.36 inch

## FREQUENCY BANDS

### LTE / 4G GSM

617 MHz	5	8	12	13	14	17	18	960 MHz
	19	20	26	27	28	29	44	
	67	68	85	103	n81	n82	n83	
	n89	n100						

### LTE / 4G UMTS

1710 MHz	1	2	3	4	9	10	25	2170 MHz
	33	34	35	36	37	39	n80	
	n84	n86	n95	n98	n101			

### LTE / 4G WCS DARS

2300 MHz	30	40	n97					2400 MHz
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### LTE / 4G

2400 MHz	7	38	41	53	69	n90		2700 MHz
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## COMPATIBLE ROUTERS

VARIANT: APLM2-HN

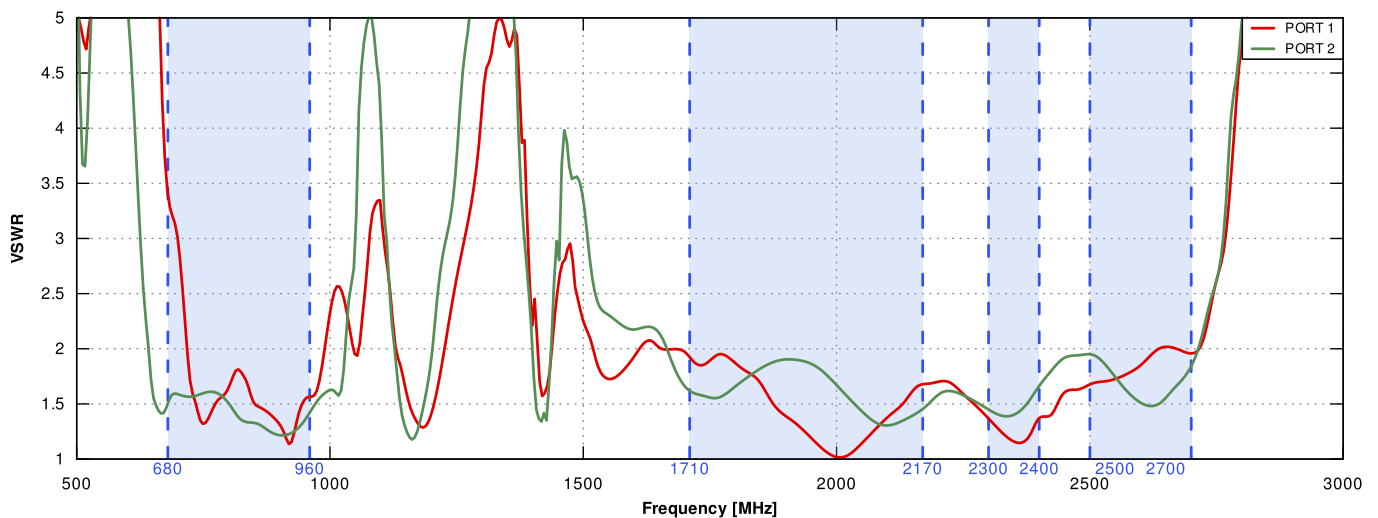
TELTONIKA	RUT200, RUT230, RUT240, RUT241, RUT260, RUT900, RUT901, RUT950, RUT951, RUT955, RUT956, RUTX09, RUTX11
DIGI	6310-DX, 6330-MX, EX12, EX15, IX10, IX15, IX20, IX30, WR31, WR44 RR
ROBUSTEL	EG5100, LG5100, R1500, R1510, R1511P, R1520 Global, R1520-4L (S), R1520-4L (V), R2010, R2011, R2110, R3000, R3000 Industrial, R3000 LG, R3000 Lite, R3000 Quad, R3010
ACKSYS	AirBox LTE, AirWan
AIRGAIN	NL-SW-LTE-GELS3, NL-SW-LTE-QBG95, NL-SW-LTE-QBG96, NL-SW-LTE-SRC7611-4, NL-SW-LTE-TC1NAG, NL-SW-LTE-TC1WWG, NL-SW-LTE-TC4NAG, NL-SW-LTE-TC4WWG, NL-SW-LTE-TG1WWG, NL-SWNB-LTE-NRF9160-D
AM TELECOM	AMM545, AMM5500, AMM574, AMM585
ANYBUS	Wireless Router WLAN
COMSET	CM210A-W, CM210Q-W, CM510Q-W, CM685T-W, CM685V-1, CM685V-4, CM685V-6, CM685V-6-G, CM820Q-4, CM820Q-6, CM820T-W, CM820V-4, CM820V-W
CRADLEPOINT	CBA550, E100, E102, IBR200, IBR600C, IBR900, L950, R500, R920, S700
D-LINK	DWR-960, G415 AX1500, G416 AX1500, N300 4G
DIGI	6310-DX, 6330-MX, EX12, EX15, IX10, IX15, IX20, IX30, WR31, WR44 RR
FIBOCOM	FM101-CG, FM101-EAU, FM101-NA, L610-EU-MiniPCIe, L610-LA-MiniPCIe, L716-CN MiniPCIe, L716-EU-MiniPCIe, NL668-AM MiniPCIe, NL668-EAU-M.2, NL668-EU MiniPCIe, NL668-JP MiniPCIe, NL668-LA MiniPCIe

<b>FORTINET</b>	FEX-101F, FEX-201F, FEX-211E, FEX-212F, FortiGate Rugged 60F-3G4G, FortiGate Rugged 70F-3G4G
<b>FOUR-FAITH</b>	4G Cellular Router F-R100, 4G Industrial Computer F4931-R2H, 4G Industrial Computer F4932-R2H-DF1, Android Industrial Computer F4932-R1Q, Cellular Wireless Router F-R200, Dual Sim 4G Router F3X46, Dual-sim WiFi Router F3946, Industrial WiFi Router F3X36Q, LAN Port Router F3X26 V2, LTE Industrial Router F3X27 V2, LTE Wireless Router F3x36
<b>MIKROTIK</b>	RB912, RB922, RBM11G, RBM33G
<b>MILESIGHT</b>	UR32
<b>OPTION</b>	CloudGate LTE WW CAT4
<b>PEPLINK</b>	Balance 20X, MAX BR1 Classic, MAX BR1 ENT, MAX BR1 IP55, MAX BR1 M2M, MAX BR1 Mini, MAX BR1 Mini (HW3), MAX BR1 Mini Core (HW3), MAX BR1 Mini M2M, MAX BR1 MK2, MAX BR1 Pro, MAX BR1 Slim
<b>PROROUTE</b>	H685 4G Router, H685 LTE 4G CAT6 Router, H820 M2M 4G Router
<b>QUECTEL</b>	LTE-A EM060K-EA, LTE-A EM060K-GL, LTE-A EM061K-GL, LTE-A EM120K-GL, LTE-A EM120R-GL
<b>ROBUSTEL</b>	EG5100, LG5100, R1500, R1510, R1511P, R1520 Global, R1520-4L (S), R1520-4L (V), R2010, R2011, R2110, R3000, R3000 Industrial, R3000 LG, R3000 Lite, R3000 Quad, R3010
<b>SIEMENS</b>	6GK5876-4AA00-2BA2, 6GK5876-4AA00-2DA2, 6GK5876-4AA10-2BA2
<b>SIERRA WIRELESS</b>	AirLink LX40, AirLink LX60, AirLink MP70, AirLink RV50X, AirLink RV55, AirLink RX55, EM7411, EM7421, EM7431, EM7511, EM7565, EM7590, EM7595, EM7690, MC7411, MC7421, MC7431, WP7607, WP7610
<b>SIMCOM</b>	A7602E-H-M2, A7602E-H-PCIEA, A7608SA-H MiniPCle, A7906E-M2, SIM7600X-H MiniPCle, SIM7600X-H-M2, SIM7600X-MiniPCle, SIM7906A-M2, SIM7906E-M2, SIM7906G-M2, SIM7912A-M2, SIM7912E-M2

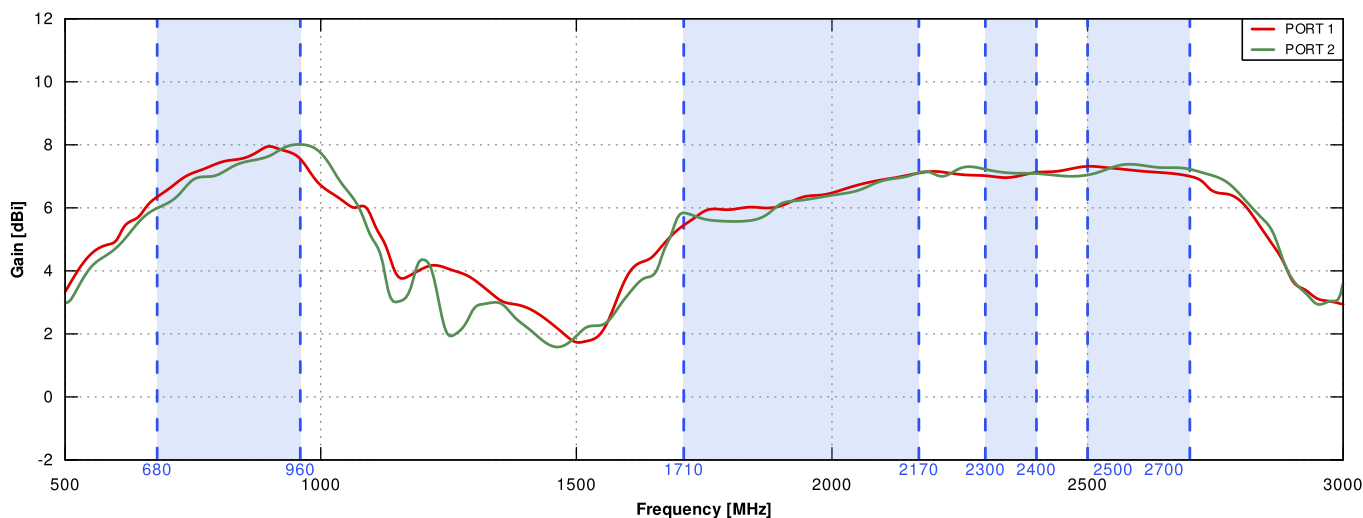
TELIT CINTERION	LE910Cx Linux mPCIe Series, LE910Cx ThreadX mPCIe Series, LM940, LN920, mPLS63, mPLS83
TELTONIKA	RUT200, RUT230, RUT240, RUT241, RUT260, RUT900, RUT901, RUT950, RUT951, RUT955, RUT956, RUTX09, RUTX11
WAVETEL	W2400 LTE , W3600 4G/LTE Dual WAN, W3604 Multi-WAN, W3608 Multi-WAN, W421, W4600, W4600-S2
WLINK	ER120, G200, G510, G520, ODU310, R210, R220, R520
ZYXEL	LTE3202-M437, LTE3301-PLUS, LTE5388-M804, LTE5398-M904
OTHER	2 * SMA, 3 * SMA

## PLOTS

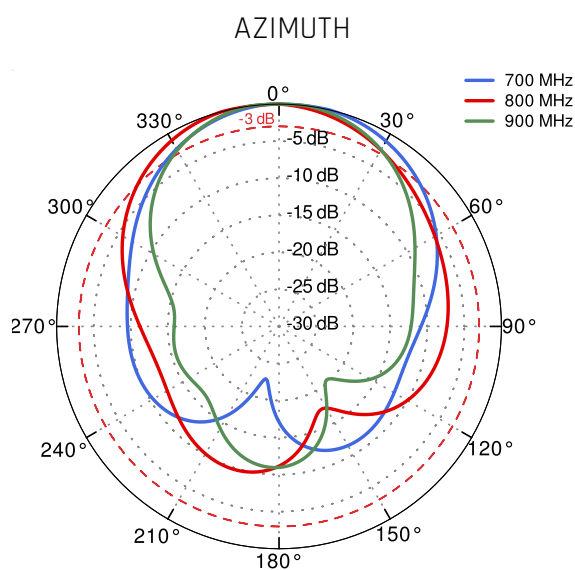
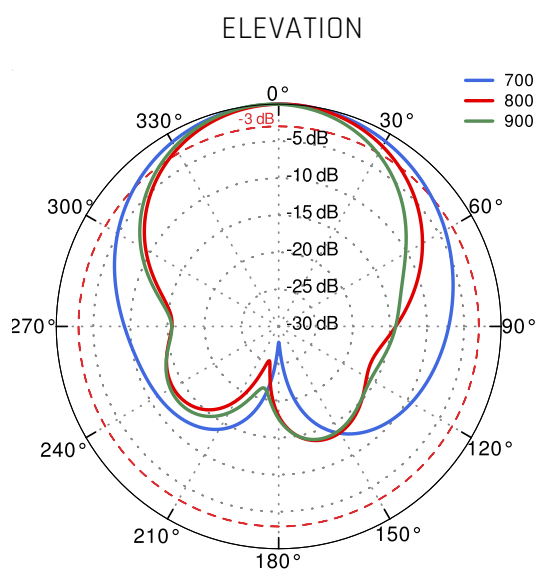
VSWR



## Gain

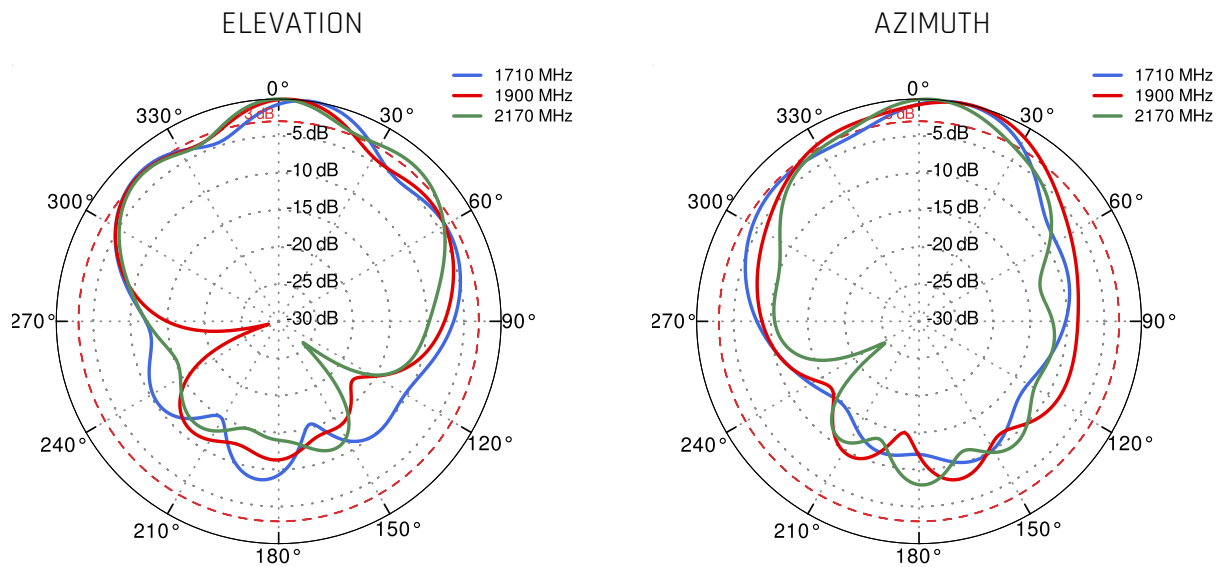


## Port 1 700MHz to 900MHz

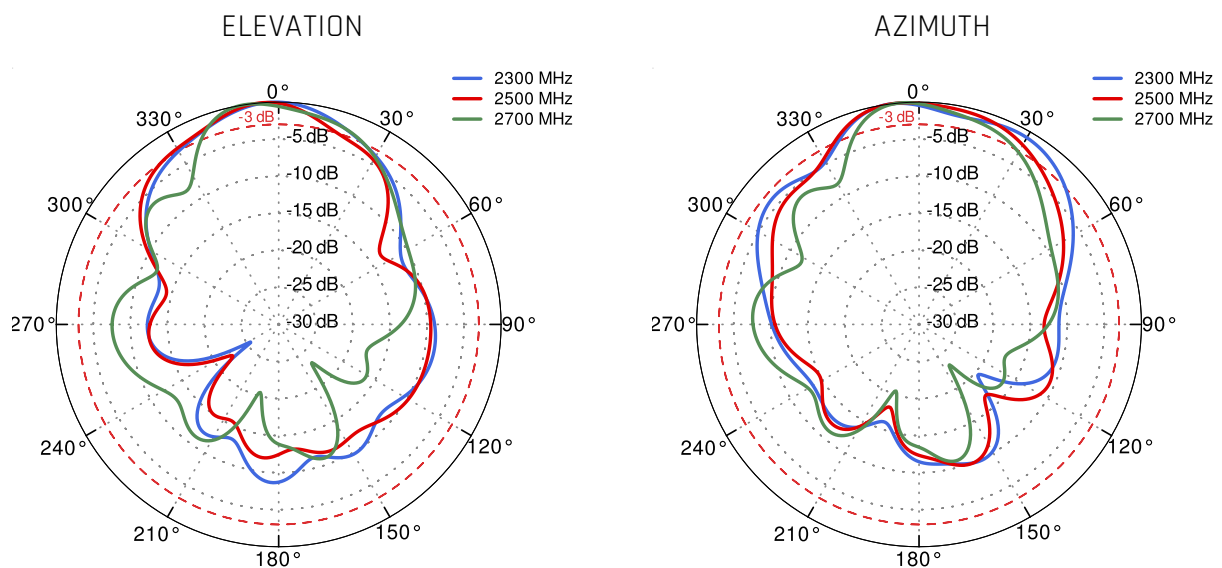




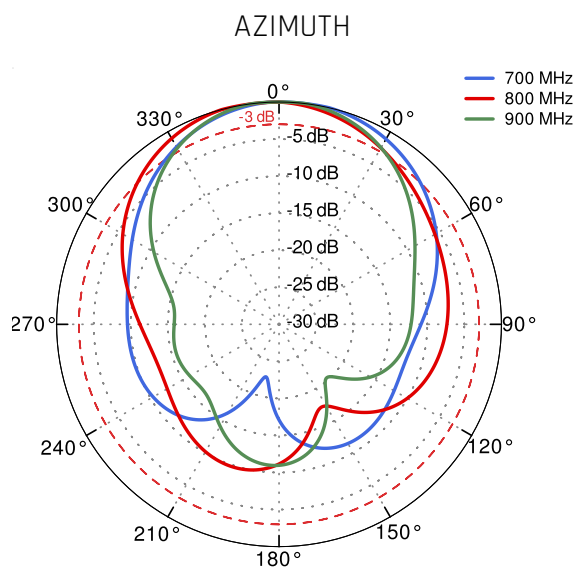
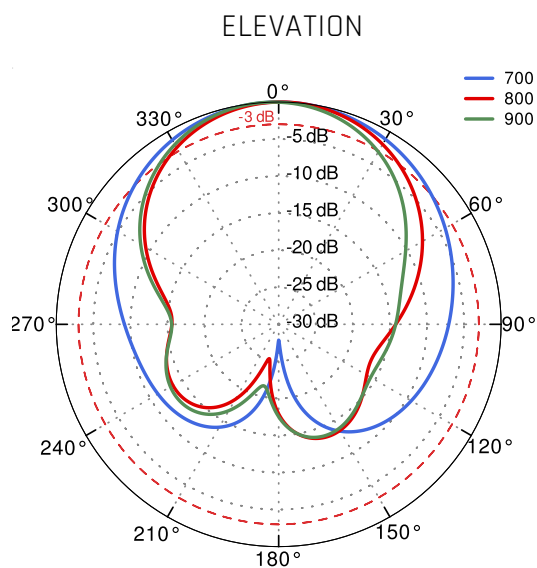
## Port 1 1.71GHz to 2.17GHz



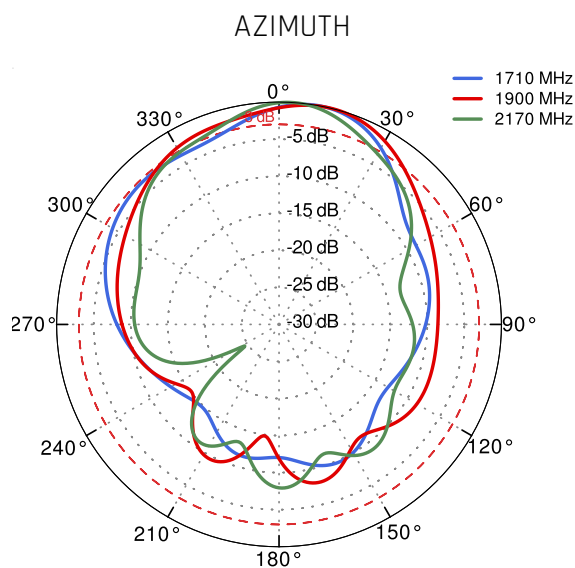
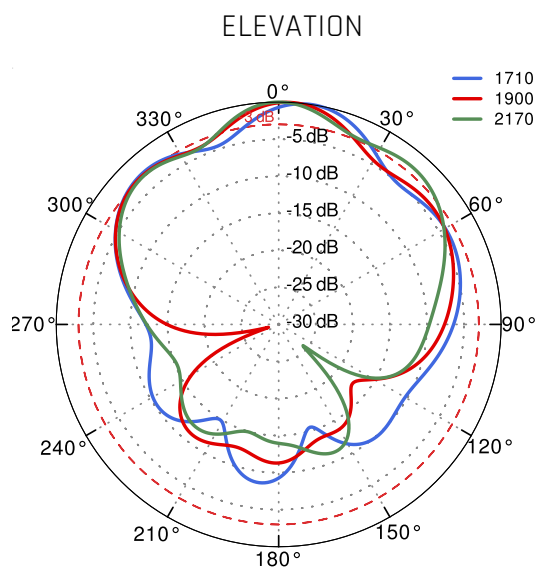
## Port 1 2.3GHz to 2.7GHz



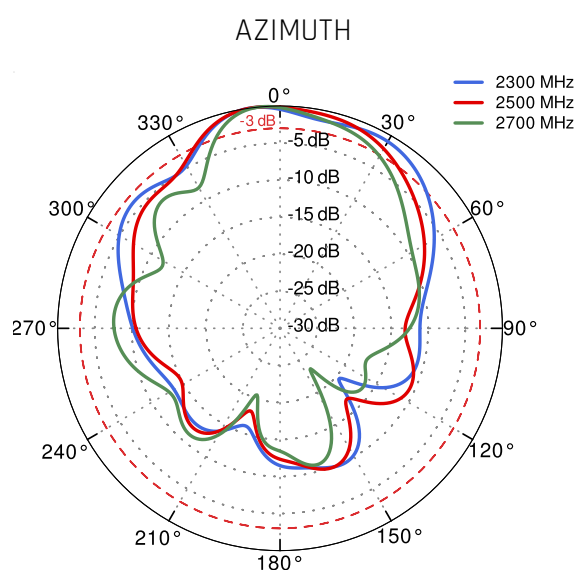
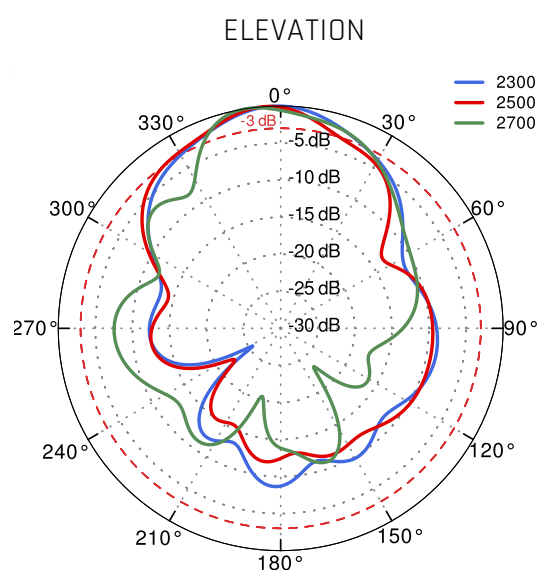
## Port 2 700MHz to 900MHz



## Port 2 1.71GHz to 2.17GHz



## Port 2 2.3GHz to 2.7GHz



## **DIMENSIONS**

